

**EXHIBIT A**

**SEPARATE ENGINEERING STATEMENTS**

**FOR**

**KAKM-DT, KTUU-DT AND KIMO-DT**

ENGINEERING STATEMENT  
IN SUPPORT OF SECOND AMENDMENT TO JOINT PETITION  
FOR RULE MAKING  
**KAKM-DT, ANCHORAGE, ALASKA**  
CHANNEL 8 50 KW MAX. 240 METERS  
MARCH 2004

This engineering statement has been prepared on behalf of Alaska Public Telecommunications, Inc., licensee of station KAKM(TV), and permittee of KAKM-DT, Anchorage, Alaska in support of a Second Amendment to Joint Petition for Rule Making filed on February 23, 2003 and previously amended on July 24, 2003, ("JPRM") to substitute Channel 8 for the allotted Channel 24 for its digital television (DTV) operation.

At present KAKM(TV) operates on analog Channel 7 (174-180 MHz) with 288 kW effective radiated power (ERP) and 240 meters antenna height above average terrain (HAAT) using a non-directional TV antenna from the Frank A. Mengel tower site ("F.A.M. Tower Site"). The geographic coordinates of that site are as follows: N 61° 25' 22", W 149° 52' 20". The F.A.M Tower Site is located approximately 22.7 km (14 miles) north of Anchorage.

The Commission has allotted KAKM(TV) Channel 24 for its digital television (DTV) operation with 1000 kW ERP and 240 meters HAAT. KAKM-DT currently holds a construction permit to operate on DTV Channel 24 with 50 kW ERP and 109 meters HAAT using a non-directional TV antenna from an antenna site which is located in downtown Anchorage, Alaska.

In the JRMP, the licensees/permittees of stations KAKM(TV)/KAKM-DT, KTUU-TV/KTUU-DT and KIMO(TV)/KIMO-DT proposed the following amendment to Section 73.622(b) (Digital Television Table of Allotments) of the Commission's rules.

<u>Community</u>	<u>Current Allotment</u>	<u>Proposed Allotment</u>
Anchorage, AK	18, 20, 22, *24, *26 28, 30, 32	*8, 10, 12, 20, 22, *26, 30, 32

The JRMP specified that the substitute DTV channels would be used by the respective DTV stations at the F.A.M. Tower Site. The Second Amendment to the JRMP

(“Second Amendment”) proposes further changes to the maximum power levels and/or directional antenna system for each DTV allotment. Specifically, the Second Amendment, as it applies to KAKM-DT specifies a slightly different power level for the station. The amended Channel 8 DTV allotment for station KAKM-DT is for 50 kW maximum ERP and 240 meters HAAT (271 meters antenna radiation center above mean sea level) from the F.A.M. Tower Site which is the licensed site for KAKM(TV). The geographic coordinates of the KAKM(TV) site, and thus for the collocated KAKM-DT site, are set forth above.

The attached Tables I and II provide the relative field values for the directional horizontal and vertical patterns of the directional antenna associated with the KAKM-DT Channel 8 DTV allotment.

#### Analog TV and DTV Allocation Situation

The attached Table III shows the analog TV and DTV stations within 500 km of KAKM-DT site on co-channel 8 and adjacent channels 7 and 9. There are no TV or DTV stations or allotments on Channel 8 within 500 km of KAKM-DT site. The FCC database shows there are two pending applications for Channel 9 analog TV station at Anchorage, Alaska. These applications have been filed by Alaska Broadcast TV, Inc. (“ABTV”) (BPET-19960916KE) and Alaska Public Telecommunications (“APT”) (BPET-19961115KE). The proposed ABTV Channel 9 analog TV antenna site is located 40.2 km south of KAKM-DT. The proposed APT Channel 9 analog TV site is co-located with KAKM-DT site. ABTV and APT have filed with the Commission a “Joint Request for Approval of Agreement” (“joint Request”) which, if granted, will result in the

dismissal of APT's Channel 9 analog TV application and the grant of ABTV's Channel 9 analog TV application.

#### OET Bulletin 69 Study

Since the ABTV Channel 9 antenna site is located more than 11 km and less than 125 km from the KAKM-DT site, an electromagnetic interference study was conducted according to the FCC OET Bulletin 69 to determine any impact on ABTV's analog Channel 9 operation.

The FCC OET Bulletin 69 study was conducted for cell sizes 0.5 km/side and 1 km terrain intervals. In addition, the KAKM-DT ERP in each direction was adjusted according to the horizontal and vertical directional patterns of the DTV antenna.

The results of the OET Bulletin 69 study are provided in the attached Table IV, and indicate the proposed Channel 8 DTV operation of KAKM-DT would cause interference to more than 2.8% population of the Grade B contour of ABTV's proposed Channel 9 operation. However, as shown in Section 2 of the Settlement Agreement which is attached to the Joint Request ABTV has agreed to accept any interference caused by the proposed KAKM-DT operation on Channel 8 with up to 100 kW.

#### Principal Community Coverage

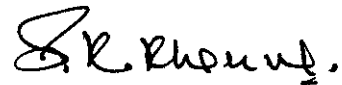
The attached map shows the computed 36 dBu contour for the proposed KAKM-DT operation on Channel 8 with 50 kW maximum ERP and 240 meters HAAT using a directional antenna. The map indicates the proposed 36 dBu contour would cover all of Anchorage, Alaska.

It has been demonstrated above the proposed substitution of Channel 8 for Channel 24 would be in compliance of the Commission's rules and policies. Therefore,

the Alaska Public Telecommunications, Inc. respectfully requests the Commission to allot Channel 8 for KAKM(TV) for its DTV operation (KAKM-DT) at Anchorage, Alaska.

Under penalty of perjury the undersigned states that the foregoing statement has been prepared by him and that the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts, he believes them to be true.

11 March 2004



S. K. Khanna  
Professional Engineer  
District of Columbia, PE License No.8057

**TABLE I**  
**KAKM-DT, CHANNEL 8, ANCHORAGE, ALASKA**  
**HORIZONTAL DIRECTIONAL RADIATION PATTERN**  
**MARCH 2004**

<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>	<u>ERP/kW</u>
0.0	0.710	25.21
10.0	0.800	32.00
20.0	0.870	37.85
30.0	0.950	45.13
40.0	0.960	46.08
50.0	0.900	40.50
60.0	0.820	33.62
70.0	0.740	27.38
80.0	0.680	23.12
90.0	0.640	20.48
100.0	0.730	26.65
110.0	0.830	34.45
120.0	0.940	44.18
130.0	0.970	47.05
140.0	0.940	44.18
150.0	0.840	35.28
160.0	0.750	28.13
170.0	0.690	23.81
180.0	0.680	23.12
190.0	0.750	28.13
200.0	0.830	34.45
210.0	0.910	41.41
220.0	0.930	43.25
230.0	0.890	39.61
240.0	0.810	32.81
250.0	0.740	27.38
260.0	0.690	23.81
270.0	0.700	24.50
280.0	0.780	30.42
290.0	0.870	37.85
300.0	0.940	45.03
310.0	0.940	44.18
320.0	0.860	36.98
330.0	0.800	32.00
340.0	0.710	25.21
350.0	0.660	21.78
37.0	1.000	50.00
129.0	1.000	50.00

TABLE II  
KAKM-DT, CHANNEL 8, ANCHORAGE, ALASKA  
VERTICAL DIRECTIONAL RADIATION PATTERN  
MARCH 2004

<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>
-16.0	0.010
-15.0	0.060
-14.0	0.110
-13.0	0.130
-12.0	0.100
-11.0	0.040
-10.0	0.070
-9.0	0.170
-8.0	0.230
-7.0	0.190
-6.0	0.090
-5.0	0.130
-4.0	0.390
-3.0	0.650
-2.0	0.871
-1.0	0.979
-0.6	1.000
0.0	0.979
1.0	0.871
2.0	0.650
3.0	0.390
4.0	0.130
5.0	0.090
6.0	0.190
7.0	0.230
8.0	0.170
9.0	0.070
10.0	0.040
11.0	0.780
12.0	0.949
13.0	0.940
14.0	0.860
15.0	0.800



TABLE III  
ANALOG TV AND DTV ALLOCATION SITUATION  
FOR THE PROPOSED DTV OPERATION OF  
KAKM-DT, ANCHORAGE, ALASKA  
CHANNEL 8 50 KW 240 METERS  
MARCH 2004

<u>CHANNEL</u>	<u>CALL</u>	<u>CITY/ STATE</u>	<u>GEOGRAPHIC COORDINATES</u>	<u>DISTANCE km</u>
8	KAKM-DT	Anchorage, AK	N 61-25-22 W 149-52-20	--
7	KAKM(TV)	Anchorage, AK	N 61-25-22 W 149-52-20	0.0
7	KFXF(TV)	Fairbanks, AK	N 64-55-20 W 147-42-55	404.9
8	None within 500 km		--	--
9	Application BPET-19960916KE	Anchorage, AK	N 61-04-02 W 149-44-36	40.2
9	Application BPET-19961115KE	Anchorage, AK	N 61-25-22 W 149-52-20	0.0

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TABLE IV

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 03-10-2004 Time: 15:25:17

Record Selected for Analysis

NEW USERRECORD-01 ANCHORAGE  
AK US  
Channel 08 ERP 50. kW HAAT 240. m RCAMSL 00271 m  
Latitude 061-25-22 Longitude 0149-52-20  
Status APP Zone 2 Border  
Dir Antenna Make usr Model KTUUH Beam tilt N Ref Azimuth 0.  
Last update Cutoff date Docket  
Comments  
Applicant

Cell Size for Service Analysis 0.5 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	21.815	227.7	94.5
45.0	37.528	202.5	96.3
90.0	17.613	270.3	95.5
135.0	39.172	260.2	101.4
180.0	19.874	270.9	96.4
225.0	35.700	239.2	99.3
270.0	21.178	235.4	95.0
315.0	35.060	217.2	97.2

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

NEW 08 ANCHORAGE  
AK USERRECORD01

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and station

SHORT TO: 960916KE 09 ANCHORAGE AK BPET 19960916KE  
 061-04- 2 0149-44-36  
 Req. separation => 11.0 <= 125.0 Actual separation 40.2 Short 84.8(  
 29.2) km

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

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## Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
08	NEW	ANCHORAGE	
AK	USERRECORD01		

## Stations Potentially Affected by Proposed Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
07	KAKM	ANCHORAGE AK	0.0	LIC	BLET -19980917KE
09	961115KE	ANCHORAGE AK	0.0	APP	BPET -19961115KE
09	960916KE	ANCHORAGE AK	40.1	APP	BPET -19960916KE

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## Analysis of Interference to Affected Station 1

### NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.
07	KAKM	ANCHORAGE AK	DTVPLN -NPLN0454

## Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
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07 KFXF FAIRBANKS AK 392.2 PLN DTVPLN -  
NPLN0455

Results for: 7N AK ANCHORAGE DTVPLN NPLN0454 PLN  
POPULATION AREA (sq km)  
within Noise Limited Contour 264909 26134.5  
not affected by terrain losses 263914 22460.3  
lost to NTSC IX 0 0.0  
lost to additional IX by ATV 0 0.0  
lost to all IX 0 0.0

Analysis of current record  
Channel Call City/State Application Ref. No.  
07 KAKM ANCHORAGE AK BLET -19980917KE

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
07	KFXF	FAIRBANKS AK	403.7	LIC	BLCT -20010302ABT
08	NEW	ANCHORAGE AK	0.0	APP	USERRECORD-01

Proposal causes no interference

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## Analysis of Interference to Affected Station 2

### NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.
09	NEW	ANCHORAGE AK	DTVPLN -NPLN0576

## Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
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Results for: 9N AK ANCHORAGE DTVPLN NPLN0576 PLN  
POPULATION AREA (sq km)  
within Noise Limited Contour 289136 28253.6  
not affected by terrain losses 269649 24921.3  
lost to NTSC IX 0 0.0  
lost to additional IX by ATV 0 0.0  
lost to all IX 0 0.0

Analysis of current record  
Channel Call City/State Application Ref. No.  
09 961115KE ANCHORAGE AK BPET -19961115KE

## Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
09	KUAC-TV	FAIRBANKS AK	401.7	LIC	BLET -319
08	NEW	ANCHORAGE AK	0.0	APP	USERRECORD-01

Proposal causes no interference

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## Analysis of Interference to Affected Station 3

### Analysis of current record

Channel	Call	City/State	Application Ref. No.
09	960916KE	ANCHORAGE AK	BPET -19960916KE

### Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
08	NEW	ANCHORAGE			
AK	40.1	APP	USERRECORD-01		

Total scenarios = 1

Result key: 1  
Scenario 1 Affected station 3  
Before Analysis

Results for: 9N AK ANCHORAGE	BPET	19960916KE	APP
	POPULATION	AREA (sq km)	
within Noise Limited Contour	289136	28253.6	
not affected by terrain losses	269649	24921.3	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	0	0.0	
lost to all IX	0	0.0	

Potential Interfering Stations Included in above Scenario 1

### After Analysis

Results for: 9N AK ANCHORAGE	BPET	19960916KE	APP
	POPULATION	AREA (sq km)	
within Noise Limited Contour	289136	28253.6	
not affected by terrain losses	269649	24921.3	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	8163	294.8	
lost to all IX	8163	294.8	

Potential Interfering Stations Included in above Scenario 1

8A AK ANCHORAGE  
USERRECORD01 APP

The following station failed the de minimis interference criteria.

8D AK ANCHORAGE  
USERRECORD01  
ERP 50.00 kW HAAT 240.0 m RCAMSL 271.0 m  
Antenna usr KTUUH

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Due to interference to the following station and scenario: 1

9N AK ANCHORAGE BPET 19960916KE  
ERP 316.00 kW HAAT 212.0 m RCAMSL 538.0 m  
Antenna 9999999999999999

Percent new DTV interference without proposal: 0.0 BPET 19960916KE  
Percent new DTV interference with proposal: 2.8 BPET 19960916KE

Proposed station is MX

8A AK ANCHORAGE

USERRECORD01 APP

9N AK ANCHORAGE BPET 19960916KE APP

Proposal MX with BPET 19960916KE scenario 1 of station  
3

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## Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application Ref. No.
08	NEW	ANCHORAGE	
AK	USERRECORD-01		

## Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
07	KAKM	ANCHORAGE AK	0.0	LIC	BLET -
19980917KE					
09	961115KE	ANCHORAGE AK	0.0	APP	BPET -
19961115KE					
09	960916KE	ANCHORAGE AK	40.1	APP	BPET -
19960916KE					

Total scenarios = 1

Result key: 2

Scenario 1 Affected station 4  
Before Analysis

Results for: 8A AK ANCHORAGE

USERRECORD01 APP

HAAT 240.0 m, ATV ERP 50.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	265309	29764.7
not affected by terrain losses	264328	26144.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0

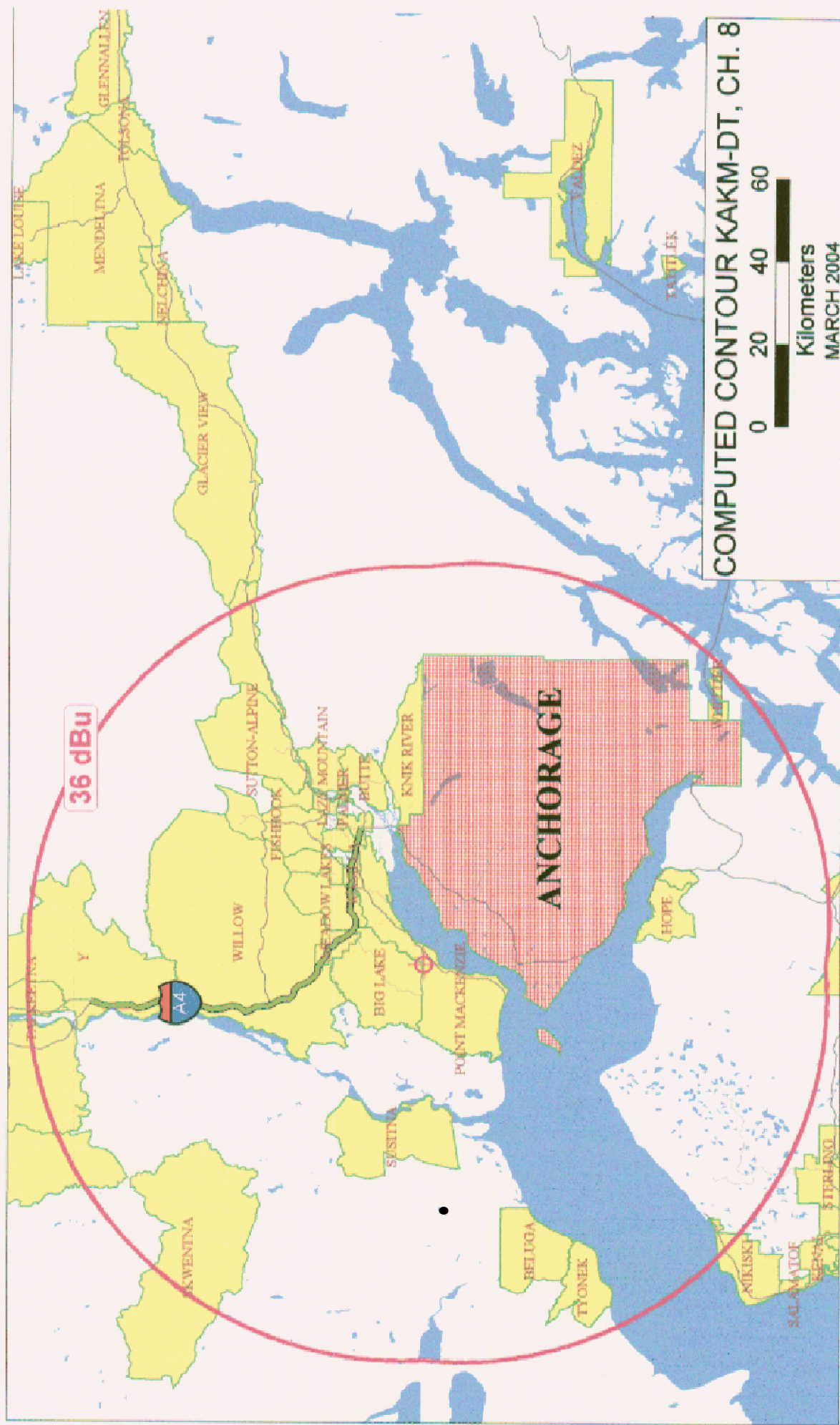
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lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED



COMPUTED CONTOUR KAKM-DT, CH. 8

0 20 40 60

Kilometers  
MARCH 2004



**ENGINEERING STATEMENT  
IN SUPPORT OF SECOND AMENDMENT TO JOINT PETITION  
FOR RULE MAKING  
KTUU-DT, ANCHORAGE, ALASKA  
CHANNEL 10 27 KW MAX. 240 METERS  
MARCH 2004**

This engineering statement has been prepared on behalf of Channel 2 Broadcasting Company, licensee of station KTUU-TV, and permittee of KTUU-DT, Anchorage, Alaska in support of a Second Amendment to Joint Petition for Rule Making filed on February 23, 2003 and previously amended on July 24, 2003, (“JPRM”) to substitute Channel 10 for the allotted Channel 18 for its digital television (DTV) operation on KTUU-DT.

At present KTUU-TV operates on analog Channel 2 (54-60 MHz) with 100 kW effective radiated power (ERP) and 219 meters antenna height above average terrain (HAAT) using a non-directional TV antenna from the Frank A. Mengel tower site (“F.A.M. Tower Site”). The geographic coordinates of that site are as follows: N 61° 25’ 22”, W 149° 52’ 20”. The F.A.M Tower Site is located approximately 22.7 km (14 miles) north of Anchorage.

The Commission has allotted KTUU-TV Channel 18 for its digital television (DTV) operation with 1000 kW ERP and 219 meters HAAT. KTUU-DT currently holds a construction permit to operate on DTV Channel 18 with 50 kW ERP and 143 meters HAAT using a non-directional TV antenna from an antenna site which is located in downtown Anchorage, Alaska.

In the JRMP, the licensees/permittees of stations KTUU-TV/KTUU-DT, KAKM(TV)/KAKM-DT and KIMO(TV)/KIMO-DT proposed the following amendment to Section 73.622(b) (Digital Television Table of Allotments) of the Commission’s rules.

<u>Community</u>	<u>Current Allotment</u>	<u>Proposed Allotment</u>
Anchorage, AK	18, 20, 22, *24, *26 28, 30, 32	*8, 10, 12, 20, 22, *26, 30, 32

The JRMP specified that the substitute DTV channels would be used by the respective DTV stations at the F.A.M. Tower Site. The Second Amendment to the JRMP (“Second Amendment”) proposes further changes to the maximum power levels and/or directional antenna system for each DTV allotment. Specifically, the Second Amendment, as it applies to KTUU-DT specifies a slightly different power level for the station. The amended Channel 10 DTV allotment for station KTUU-DT is for 27 kW maximum ERP and 240 meters HAAT (271 meters antenna radiation center above mean sea level) from the F.A.M. Tower Site which is the licensed site for KTUU-TV. The geographic coordinates of the KTUU-TV site, and thus for the collocated KTUU-DT site, are set forth above.

The attached Tables I and II provide the relative field values for the directional horizontal and vertical patterns of the directional antenna associated with the KTUU-DT Channel 10 DTV allotment.

#### Analog TV and DTV Allocation Situation

The attached Table III shows the analog TV and DTV stations within 500 km of KTUU-DT site on co-channel 10 and adjacent channels 9 and 11. There are no TV or DTV stations or allotments on Channel 10 within 500 km of KTUU-DT site. Station KTVA-TV, Channel 11, Anchorage, Alaska, site is located 25.7 km south of the KTUU-DT site. In addition, the FCC database shows there are two pending applications for Channel 9 analog TV station at Anchorage, Alaska. These applications have been filed by Alaska Broadcast TV, Inc. (ABTV) (BPET-19960916KE) and Alaska Public Telecommunications (APT) (BPET-19961115KE). The proposed ABTV Channel 9 analog TV antenna site is located 40.2 km south of KTUU-DT. The proposed APT

Channel 9 analog TV site is co-located with KTUU-DT site. ABTV and APT have filed with the Commission a “Joint Request for Approval of Agreement” which, if granted, will result in the dismissal of APT’s Channel 9 analog TV application and the grant of ABTV’s Channel 9 analog TV application.

#### OET Bulletin 69 Study

Since the ABTV Channel 9 and the licensed KTVA, Channel 11 antenna sites are located more than 11 km and less than 125 km from the KTUU-DT site, electromagnetic interference studies were conducted according to the FCC OET Bulletin 69 to determine any impact on these two analog TV operations.

The FCC OET Bulletin 69 study was conducted for cell sizes 0.5 km/side and 1 km terrain intervals. In addition, the KTUU-DT ERP in each direction was adjusted according to the horizontal and vertical directional patterns of the DTV antenna.

The results of the OET Bulletin 69 study are provided in the attached Table IV, and indicate the proposed Channel 10 DTV operation of KTUU-DT would not cause harmful interference to more than 2% population of the Grade B contours of KTVA-TV and the proposed ABTV Channel 9 operation. Therefore, the proposed Channel 10 DTV operation at Anchorage, Alaska would be in compliance of Section 73.623(c) of the Commission’s rules.

#### Principal Community Coverage

The attached map shows the computed 36 dBu contour for the proposed KTUU-DT operation on Channel 10 with 27 kW maximum ERP and 240 meters HAAT using a directional antenna. The map indicates the proposed 36 dBu contour would cover all of Anchorage, Alaska.

It has been demonstrated above the proposed substitution of Channel 10 for Channel 18 would be in full compliance of the Commission's rules. Therefore, the Channel 2 Broadcasting Company respectfully requests the Commission to allot Channel 10 for KTUU-TV for its DTV operation (KTUU-DT) at Anchorage, Alaska.

Under penalty of perjury the undersigned states that the foregoing statement has been prepared by him and that the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts, he believes them to be true.

11 March 2004



S. K. Khanna  
Professional Engineer  
District of Columbia, PE License No.8057

TABLE I  
KTUU-DT, CHANNEL 10, ANCHORAGE, ALASKA  
HORIZONTAL DIRECTIONAL RADIATION PATTERN  
MARCH 2004

<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>	<u>ERP/kW</u>
0.0	0.710	13.61
10.0	0.800	17.28
20.0	0.870	20.43
30.0	0.950	24.36
40.0	0.960	24.88
50.0	0.900	21.87
60.0	0.820	18.15
70.0	0.740	14.79
80.0	0.680	12.48
90.0	0.640	11.06
100.0	0.730	14.39
110.0	0.830	18.60
120.0	0.940	23.86
130.0	0.970	25.40
140.0	0.940	23.85
150.0	0.840	19.05
160.0	0.750	15.19
170.0	0.690	12.85
180.0	0.680	12.48
190.0	0.750	15.19
200.0	0.830	18.60
210.0	0.910	22.36
220.0	0.930	23.35
230.0	0.890	21.39
240.0	0.810	17.71
250.0	0.740	14.79
260.0	0.690	12.85
270.0	0.700	13.23
280.0	0.780	16.43
290.0	0.870	20.44
300.0	0.940	23.89
310.0	0.940	23.89
320.0	0.860	19.97
330.0	0.800	17.28
340.0	0.710	13.61
350.0	0.660	11.76
37.0	1.000	27.00
129.0	1.000	27.00

TABLE II  
KTUU-DT, CHANNEL 10, ANCHORAGE, ALASKA  
VERTICAL DIRECTIONAL RADIATION PATTERN  
MARCH 2004

<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>
-16.0	0.010
-15.0	0.060
-14.0	0.110
-13.0	0.130
-12.0	0.100
-11.0	0.040
-10.0	0.070
-9.0	0.170
-8.0	0.230
-7.0	0.190
-6.0	0.090
-5.0	0.130
-4.0	0.390
-3.0	0.650
-2.0	0.871
-1.0	0.979
-0.6	1.000
0.0	0.979
1.0	0.871
2.0	0.650
3.0	0.390
4.0	0.130
5.0	0.090
6.0	0.190
7.0	0.230
8.0	0.170
9.0	0.070
10.0	0.040
11.0	0.780
12.0	0.949
13.0	0.940
14.0	0.860
15.0	0.800

TABLE III  
ANALOG TV AND DTV ALLOCATION SITUATION  
FOR THE PROPOSED DTV OPERATION OF  
KTUU-DT, ANCHORAGE, ALASKA  
CHANNEL 10 27 KW 240 METERS  
MARCH 2004

<u>CHANNEL</u>	<u>CALL</u>	<u>CITY/ STATE</u>	<u>GEOGRAPHIC COORDINATES</u>	<u>DISTANCE km</u>
10	KTUU-DT	Anchorage, AK	N 61-25-22 W 149-52-20	--
9	Application BPET-19960916KE	Anchorage, AK	N 61-04-02 W 149-44-36	40.2
9	Application BPET-19961115KE	Anchorage, AK	N 61-25-22 W 149-52-20	0.0
10	None within 500 km		--	--
11	KTVA(TV) LIC	Anchorage, AK	N 61-11-33 W 149-54-01	25.7



TABLE IV

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 03-02-2004 Time: 16:33:34

Record Selected for Analysis

NEW USERRECORD-01 ANCHORAGE  
 AK US  
 Channel 10 ERP 27. kW HAAT 240. m RCAMSL 00271 m  
 Latitude 061-25-22 Longitude 0149-52-20  
 Status APP Zone 2 Border  
 Dir Antenna Make usr Model KTUUH Beam tilt N Ref Azimuth 0.  
 Last update Cutoff date Docket  
 Comments  
 Applicant

Cell Size for Service Analysis 0.5 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	11.805	227.7	89.9
45.0	20.311	202.5	91.8
90.0	9.528	270.3	90.7
135.0	21.198	260.2	96.5
180.0	10.752	270.9	91.7
225.0	19.320	239.2	94.5
270.0	11.459	235.4	90.2
315.0	18.974	217.2	92.6

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

NEW 10 ANCHORAGE  
 AK USERRECORD01

**KHANNA & GUILL, Inc. – Consulting Engineers**

and station

SHORT TO: 960916KE 09 ANCHORAGE AK BPET 19960916KE  
061-04- 2 0149-44-36  
Req. separation => 11.0 <= 125.0 Actual separation 40.2 Short 84.8(  
29.2) km

SHORT TO: KTVA 11 ANCHORAGE AK BLCT 19831019KM  
061-11-33 0149-54- 1  
Req. separation => 11.0 <= 125.0 Actual separation 25.7 Short 99.3(  
14.7) km

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

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\*

## Start of Interference Analysis

Proposed Station			
Channel	Call	City/State	ARN
10	NEW	ANCHORAGE	
AK	USERRECORD01		

### Stations Potentially Affected by Proposed Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
09 19961115KE	961115KE	ANCHORAGE AK	0.0	APP	BPET	-
09 19960916KE	960916KE	ANCHORAGE AK	40.1	APP	BPET	-
11 20010426AAO	KTVA	ANCHORAGE AK	0.0	CP	BPCT	-
11 19831019KM	KTVA	ANCHORAGE AK	25.6	LIC	BLCT	-

## Analysis of Interference to Affected Station 1

# KHANNA & GUILL, Inc. - Consulting Engineers

## NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
09	NEW	ANCHORAGE AK	DTVPLN	-NPLN0576

### Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
----------	------	------------	----------	--------	-------------	------

Results for: 9N AK ANCHORAGE

	DTVPLN	NPLN0576	PLN
	POPULATION	AREA (sq km)	
within Noise Limited Contour	289136	28253.6	
not affected by terrain losses	269649	24921.3	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	0	0.0	
lost to all IX	0	0.0	

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	961115KE	ANCHORAGE AK	BPET	-19961115KE

### Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
09	KUAC-TV	FAIRBANKS AK	401.7	LIC	BLET	-319
10	NEW	ANCHORAGE				
AK	0.0	APP	USERRECORD-01			

Proposal causes no interference

#####  
#

### Analysis of Interference to Affected Station 2

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	960916KE	ANCHORAGE AK	BPET	-19960916KE

### Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
10	NEW	ANCHORAGE				
AK	40.1	APP	USERRECORD-01			

Total scenarios = 1

Result key: 1  
Scenario 1 Affected station 2  
Before Analysis

# KHANNA & GUILL, Inc. - Consulting Engineers

Results for: 9N AK ANCHORAGE BPET 19960916KE APP

	POPULATION	AREA (sq km)
within Noise Limited Contour	289136	28253.6
not affected by terrain losses	269649	24921.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

## After Analysis

Results for: 9N AK ANCHORAGE BPET 19960916KE APP

	POPULATION	AREA (sq km)
within Noise Limited Contour	289136	28253.6
not affected by terrain losses	269649	24921.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	4883	146.5
lost to all IX	4883	146.5

Potential Interfering Stations Included in above Scenario 1

## 10A AK ANCHORAGE

USERRECORD01 APP

#####  
#

## Analysis of Interference to Affected Station 3

### NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.
11	KTVA	ANCHORAGE AK	DTVPLN -NPLN0694

### Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
----------	------	------------	----------	--------	------------------

Results for: 11N AK ANCHORAGE DTVPLN NPLN0694 PLN

	POPULATION	AREA (sq km)
within Noise Limited Contour	250632	10652.7
not affected by terrain losses	249923	9759.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to all IX	0	0.0

### Analysis of current record

Channel	Call	City/State	Application Ref. No.
11	KTVA	ANCHORAGE AK	BPCT -20010426AAO

### Stations Potentially Affecting This Station

# KHANNA & GUILL, Inc. - Consulting Engineers

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
11	KTVF	FAIRBANKS AK	395.3	LIC	BLCT	-
19881031KG						
10	NEW	ANCHORAGE				
AK	0.0	APP	USERRECORD-01			
Proposal causes no interference						

#####  
#

## Analysis of Interference to Affected Station 4

### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
11	KTVA	ANCHORAGE AK	BLCT	-19831019KM

### Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
10	NEW	ANCHORAGE				
AK	25.6	APP	USERRECORD-01			

Total scenarios = 2

Result key: 2  
Scenario 1 Affected station 4  
Before Analysis

Results for: 11N AK ANCHORAGE	BLCT	19831019KM	LIC
	POPULATION	AREA (sq km)	
within Noise Limited Contour	250632	10652.7	
not affected by terrain losses	249923	9759.9	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	0	0.0	
lost to all IX	0	0.0	

Potential Interfering Stations Included in above Scenario 1

### After Analysis

Results for: 11N AK ANCHORAGE	BLCT	19831019KM	LIC
	POPULATION	AREA (sq km)	
within Noise Limited Contour	250632	10652.7	
not affected by terrain losses	249923	9759.9	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	4997	885.1	
lost to all IX	4997	885.1	

Potential Interfering Stations Included in above Scenario 1

# KHANNA & GUILL, Inc. - Consulting Engineers

10A AK ANCHORAGE

USERRECORD01

APP

Result key:

3

Scenario

2

Affected station

4

Before Analysis

Results for: 11N AK ANCHORAGE

BLCT

19831019KM

LIC

	POPULATION	AREA (sq km)
within Noise Limited Contour	250632	10652.7
not affected by terrain losses	249923	9759.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario

2

After Analysis

Results for: 11N AK ANCHORAGE

BLCT

19831019KM

LIC

	POPULATION	AREA (sq km)
within Noise Limited Contour	250632	10652.7
not affected by terrain losses	249923	9759.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	4997	885.1
lost to all IX	4997	885.1

Potential Interfering Stations Included in above Scenario

2

10A AK ANCHORAGE

USERRECORD01

APP

#####  
#

Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
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10	NEW	ANCHORAGE	
----	-----	-----------	--

AK USERRECORD-01

Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
09	961115KE	ANCHORAGE AK	0.0	APP	BPET -
19961115KE					
09	960916KE	ANCHORAGE AK	40.1	APP	BPET -
19960916KE					
11	KTVA	ANCHORAGE AK	0.0	CP	BPCT -
20010426AAO					

Total scenarios = 2

# KHANNA & GUILL, Inc. - Consulting Engineers

Result key: 4  
 Scenario 1 Affected station 5  
 Before Analysis

Results for: 10A AK ANCHORAGE

USERRECORD01 APP  
 HAAT 240.0 m, ATV ERP 27.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	264938	26939.0
not affected by terrain losses	263963	23479.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

Result key: 5  
 Scenario 2 Affected station 5  
 Before Analysis

Results for: 10A AK ANCHORAGE

USERRECORD01 APP  
 HAAT 240.0 m, ATV ERP 27.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	264938	26939.0
not affected by terrain losses	263963	23479.8
lost to NTSC IX	13	217.8
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	13	217.8

Potential Interfering Stations Included in above Scenario 2

9N AK ANCHORAGE BPET 19960916KE APP



COMPUTED CONTOUR KTUU-DT, CH. 10

0 20 40 60

Kilometers

MARCH 2004



**ENGINEERING STATEMENT  
IN SUPPORT OF SECOND AMENDMENT TO JOINT PETITION  
FOR RULE MAKING  
KIMO-DT, ANCHORAGE, ALASKA  
CHANNEL 12 50 KW MAX. 240 METERS  
MARCH 2004**

This engineering statement has been prepared on behalf of Smith Television License Holdings, Inc., licensee of station KIMO(TV), and permittee of KIMO-DT, Anchorage, Alaska in support of a Second Amendment to Joint Petition for Rule Making filed on February 23, 2003 and previously amended on July 24, 2003, (“JPRM”) to substitute Channel 12 for the allotted Channel 30 for its digital television (DTV) operation on KIMO-DT.

At present KIMO(TV) operates on analog Channel 13 (210-216 MHz) with 316 kW effective radiated power (ERP) and 238 meters antenna height above average terrain (HAAT) using a non-directional TV antenna from the Frank A. Mengel tower site (“F.A.M. Tower Site”). The geographic coordinates of that site are as follows: N 61° 25’ 22”, W 149° 52’ 20”. The F.A.M Tower Site is located approximately 22.7 km (14 miles) north of Anchorage.

The Commission has allotted KIMO(TV) Channel 30 for its digital television (DTV) operation with 1000 kW ERP and 238 meters HAAT. KIMO-DT currently holds a construction permit to operate on DTV Channel 30 with 108 kW ERP and 155 meters HAAT using a directional TV antenna from the F.A.M. Tower site.

In the JRMP, the licensees/permittees of stations KIMO(TV)/KIMO-DT, KTUU-TV/KTUU-DT and KAKM(TV)/KAKM-DT proposed the following amendment to Section 73.622(b) (Digital Television Table of Allotments) of the Commission’s rules.

<u>Community</u>	<u>Current Allotment</u>	<u>Proposed Allotment</u>
Anchorage, AK	18, 20, 22, *24, *26 28, 30, 32	*8, 10, 12, 20, 22, *26, 30, 32

The JRMP specified that the substitute DTV channels would be used by the respective DTV stations at the F.A.M. Tower Site. The Second Amendment to the JRMP

(“Second Amendment”) proposes further changes to the maximum power levels and/or directional antenna system for each DTV allotment. Specifically, the Second Amendment, as it applies to KIMO-DT specifies a slightly different power level for the station. The amended Channel 12 DTV allotment for station KIMO-DT is for 50 kW maximum ERP and 240 meters HAAT (271 meters antenna radiation center above mean sea level) from the F.A.M. Tower Site which is the licensed site for KIMO(TV). The geographic coordinates of the KIMO(TV) site, and thus for the collocated KIMO-DT site, are set forth above.

The attached Tables I and II provide the relative field values for the directional horizontal and vertical patterns of the directional antenna associated with the KIMO-DT Channel 12 DTV allotment.

#### Analog TV and DTV Allocation Situation

The attached Table III shows the analog TV and DTV stations within 500 km of KIMO-DT site on co-channel 12 and adjacent channels 11 and 13. There are no TV or DTV stations or allotments on Channel 12 within 500 km of KIMO-DT site. Station KTVA-TV, Channel 11, Anchorage, Alaska, site is located 25.7 km south of the KIMO-DT site.

#### OET Bulletin 69 Study

Since the licensed KTVA, Channel 11 antenna site is located more than 11 km and less than 125 km from the KIMO-DT site, an electromagnetic interference study was conducted according to the FCC OET Bulletin 69 to determine any impact on KTVA’s analog TV operation.

The FCC OET Bulletin 69 study was conducted for cell sizes 0.5 km/side and

1 km terrain intervals. In addition, the KIMO-DT ERP in each direction was adjusted according to the horizontal and vertical directional patterns of the DTV antenna.

The results of the OET Bulletin 69 study are provided in the attached Table IV, and indicate the proposed Channel 12 DTV operation of KIMO-DT would not cause harmful interference to more than 2% population of the Grade B contour of KTVA-TV. Therefore, the proposed Channel 12 DTV operation at Anchorage, Alaska would be in compliance of Section 73.623(c) of the Commission's rules.


Principal Community Coverage

The attached map shows the computed 36 dBu contour for the proposed KIMO-DT operation on Channel 12 with 50 kW maximum ERP and 240 meters HAAT using a directional antenna. The map indicates the proposed 36 dBu contour would cover all of Anchorage, Alaska.

It has been demonstrated above the proposed substitution of Channel 12 for Channel 30 would be in full compliance of the Commission's rules. Therefore, the Smith Television License Holdings, Inc., respectfully requests the Commission to allot Channel 12 for KIMO(TV) for its DTV operation (KIMO-DT) at Anchorage, Alaska.

Under penalty of perjury the undersigned states that the foregoing statement has been prepared by him and that the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts, he believes them to be true.

11 March 2004



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Professional Engineer  
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